

**Claims:**

1. Preform used for pulling a fibre comprising a bulk part (41) and a head part (42) and the head part (42) is attached to the bulk part (41),  
5 **characterised by that** the head part (42) comprises a narrower end (42a) and a wider end (42b), and the wider end (42b) of the head part (42) is connected to the bulk part (41), wherein a heat load directed to said preform will be distributed to the cross section of said bulk (41) part in a predetermined manner.
- 10 2. Preform according to claim 1 **characterised by that** said head part (42) is at least partly cone shaped.
3. Preform according to claim 1 **characterised by that** said head part  
15 (42) comprises amorphous material.
4. Preform according to claim 1 **characterised by that** said head part (42) and said bulk part (41) are made of compatible materials
- 20 5. Preform according to claim 4 **characterised by that** said bulk part (41) comprises pure or doped quartz and said head part (42) comprises glass.
6. Preform according to claim 4 **characterised by that** said bulk part  
25 (41) comprises pure or doped phosphate glass and said head part (42) comprises glass.
7. Preform according to claim 4 **characterised by that** said bulk part (41) comprises pure or doped fluoride glass and said head part (42)  
30 comprises glass.
8. Preform according to claim 1 **characterised by that** said head part (42) comprises material increasing the heat absorption.
- 35 9. Preform according to claim 1 **characterised by that** said head part (42) and said bulk part (41) are at least partly joined together by process of melting and solidifying.

10. Preform according to claim 1 **characterised by that** said head part (42) and said bulk part (41) are at least partly joined together by a mechanical joint.
- 5 11. Preform according to claim 1 **characterised by that** cross-section of said head part (42) on the side facing said bulk part (41) is substantially equal to the cross-section of said bulk part (41) and the cross-section of said head part (42) opposite to said bulk (41) part is smaller than said cross-section facing said bulk part (41).
- 10 12. Preform according to claim 1 **characterised by that** said bulk part (41) comprises at least one non-homogeneous region.
- 15 13. Preform according to claim 12 **characterised by that** said at least one non-homogeneous region comprises a hole.
- 20 14. Preform according to claim 12 **characterised by that** said at least one non-homogeneous region comprises an amorphous material with an index of reflection difference than the index of reflection of the main material used in said bulk part.
- 25 15. Preform according to claim 12 **characterised by that** said at least one non-homogeneous region comprises an amorphous material that is doped with rare earth.
- 30 16. A head part for a preform of a fibre **characterised by that** said head part (42) comprises a narrower end (42a) and a wider end (42b), and the wider end (42b) of the head part (42) can be connected to the bulk part (41), wherein a heat load directed to said preform will be distributed to the cross section of said bulk (41) part in a predetermined manner.
- 35 17. A head part according to claim 16 **characterised by that** said head part (42) is at least partly cone shaped.
18. A head part according to claim 16 **characterised by that** said head part (42) comprises amorphous material.

19. A head part according to claim 16 **characterised by that** said head part (42) comprises material increasing the heat absorption.
- 5 20. Method for manufacturing a fibre from a perform that comprises a bulk part (41) and a head part (42) is attached to the bulk part (41), the method comprising the steps of
- 10 heating a preform so that a surface of the preform is at least partly transformed to a form suitable for pulling a fibre and
- directing a pulling effect to at least the transformed part of the preform,
- 15 **characterised by that** the method further comprising the step of controlling at least in the beginning of the heating process at least a part of a heat load directed to said preform by a head part (42) comprising a narrower end (42a) and a wider end (42b) wherein the wider end (42b) of the head part is attached to the bulk part (41).
- 20 21. Method according to claim 20 **characterised by that** said step of controlling is such that the heat load is more evenly distributed to the cross section of said surface that it would be without said head part (42).
- 25 22. Method according to claim 20 **characterised by that** said head part (42) is at least partly cone shaped.
- 30 23. Method according to claim 20 **characterised by that** the method further comprise steps of joining at least partly said head part (42) to a bulk part (41) of said preform.
24. Method according to claim 23 **characterised by that** said step of joining precede said step of heating.
- 35 25. Method according to claim 23 **characterised by that** said step of joining further comprises steps of melting and solidifying.